REMARKS

The Office Action dated March 28, 2003, has been received and carefully noted. The above amendments to the claims 9 and 21, the substitute abstract, and the following remarks, are submitted as a full and complete response thereto.

The Office Action objected to the specification, specifically the abstract, for alleged improprieties in the language of the abstract. In response, Applicants have submitted herewith a substitute abstract that attempts to remove the improprieties in the language asserted by the Office Action. Claim 9 was also objected to because a limitation contained therein allegedly lacked proper antecedent basis. Claim 9 has been amended and Applicants respectfully assert that objections to claim 9 should be lifted. Reconsideration and withdrawal of the above objections are respectfully requested.

Claims 2-4 and 21 were rejected under 35 U.S.C. §102(b) as being anticipated by *Crayford* (U.S. Patent No. 5,404,544). Claims 5-20 and 22-23 were rejected under 35 U.S.C. §103(a) as being obvious over *Crayford* in view of *Wakeley et al.* (U.S. Patent No. 6,198,727). The above rejections are respectfully traversed based on the remarks that follow.

The present invention, as recited in claim 2, is directed to a transceiver circuit for transmitting and receiving industry-standard data signals. The transceiver circuit includes a transmitter subcircuit transmitting a pulse during powered-down mode to indicate a live transceiver circuit, wherein the pulse does not conform to industry-standard pulse for indicating a live transceiver, and a receiver subcircuit. The transmitter

subcircuit and the receiver subcircuit each have their own power supply and means for activation and deactivation.

The present invention, as recited in claim 10, is directed to a transceiver circuit for transmitting and receiving industry-standard data signals. The transceiver circuit includes a transmitter subcircuit transmitting a pulse during powered-down mode to indicate a live transceiver circuit, wherein the pulse does not conform to an industry-standard pulse for indicating a live transceiver, and a receiver subcircuit having a media independent interface for receiving data, the receiver subcircuit remains power-on during powered-down mode. The transmitter and receiver subcircuits each have its own power supply and means for activation and deactivation.

The present invention, as recited in claim 17, is directed to a transceiver circuit for transmitting and receiving industry-standard data signals. The transceiver circuit includes a transmitter subcircuit transmitting a minimally powered link pulse during powered-down mode to indicate a live transceiver circuit, the pulse does not conform to industry-standard pulse for indicating a live transceiver, and a receiver subcircuit having a media independent interface for receiving data, where the receiver subcircuit remains power-on during powered-down mode and upon receiving signal activity activates the transceiver into power-on mode. The transmitter and receiver subcircuits each have its own power supply and means for activation and deactivation.

The present invention, as recited in claim 21, is directed to a transceiver circuit for transmitting and receiving industry-standard data signals. The transceiver circuit

includes transmitter subcircuit means for transmitting a pulse during powered-down mode to indicate a live transceiver circuit, wherein the pulse does not conform to industry-standard pulse for indicating a live transceiver, and receiver subcircuit means for receiving data. The transmitter subcircuit means and the receiver subcircuit means each have its own power supply and means for activation and deactivation.

The present invention, as recited in claim 22, is directed to a transceiver circuit for transmitting and receiving industry-standard data signals. The transceiver circuit includes transmitter subcircuit means for transmitting a pulse during powered-down mode to indicate a live transceiver circuit, wherein the pulse does not conform to an industry-standard pulse for indicating a live transceiver and receiver subcircuit means for having a media independent interface for receiving data, the receiver subcircuit remains power-on during powered-down mode. The transmitter subcircuit means and the receiver subcircuit means each have its own power supply and means for activation and deactivation.

The present invention, as recited in claim 23, is directed to a transceiver circuit for transmitting and receiving industry-standard data signals. The transceiver circuit includes a transmitter subcircuit means for transmitting a minimally powered link pulse during powered-down mode to indicate a live transceiver circuit, the pulse does not conform to industry-standard pulse for indicating a live transceiver, and a receiver subcircuit means having a media independent interface for receiving data, the receiver subcircuit remains power-on during powered-down mode and upon receiving signal

activity activates the transceiver into power-on mode. The transmitter subcircuit means and the receiver subcircuit means each have its own power supply and means for activation and deactivation.

Crayford is directed to a network connection system that allows for the power consumption of an Ethernet connection to be managed by the operating software/hardware. When in the "link good" condition, a 10BASE-T transceiver is required to output a link status (LNKST) signal to this effect. The Media Access Controller (MAC) 30, with an embedded 10BASE-T transceiver (37), uses the LNKST signal to provide power management to the MAC (30). By using the programmable AWAKE bit, the receive section of the 10BASE-T transceiver (37) can remain powered, even if the SLEEP input to the MAC (30) is activated. This allows the transceiver (37) to detect a link beat pulse (60) or receive packet activity. While both the current invention and *Crayford* are concerned with power management of a connection, how they each accomplish this management is quite different.

Claim 2 recites, in part, that "the pulse does not *conform to industry-standard pulse for* *indicating a live transceiver*." Similar limitations can be found in independent claims 10, 17 and 21-23. While the Office Action appears to indicate *Crayford* supplies such a teaching, no such teaching could be found in *Crayford*. The sections of *Crayford* indicated by the Office Action as teaching such a limitation merely recites that the LNKST signal is used to provide power management to the MAC. The only pulse

discussed in *Crayford* is the link beat pulse 60 that is produced by the 10BASE-T transceiver to establish a link in the network is in place. Nowhere does *Crayford* establish that such a pulse would not conform to industry-standard pulses for indicating a live transceiver. As such, Applicants respectfully assert that *Crayford* cannot anticipate the subject matter of claims 2-4 and 21.

Similarly, Applicants respectfully assert that there is no teaching or suggestion in *Crayford* to modify that reference to reach the claims of the instant invention. As discussed above, while *Crayford* and the instant invention may have similar objectives, i.e. power management, they provide that management differently. To suggest that it would have been obvious to modify *Crayford* to have a transmitter subcircuit transmit a pulse during powered-down mode to indicate a live transceiver circuit, wherein the pulse does not conform to industry-standard pulse for indicating a live transceiver, would change the operation of the system described in *Crayford.* If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). As such, Applicants respectfully assert that such a modification of *Crayford* to reach the claims of the instant application would be improper and that the claims are not rendered obvious over *Crayford* alone.

With respect to the rejection of claims 5-20, 22 and 23, *Wakeley et al.* is also cited to cure the deficiencies of *Crayford*, namely an industry-standard pulse, a transceiver

with an auto-negotiation mode and a receiver having a media independent interface. Even if it were accepted that *Wakeley et al.* teaches the above recited deficiencies of *Crayford*, *Wakeley et al.* would still not teach the use of a transmitter subcircuit transmit a pulse during powered-down mode to indicate a live transceiver circuit, wherein the pulse does not conform to industry-standard pulse for indicating a live transceiver. As such, Applicants respectfully assert that the rejection of claims 5-20, 22 and 23 is improper and should be withdrawn.

Claims 2-23 are pending. Claims 3-9 depend from independent claim 1, claims 11-16 depend from independent claim 10 and claims 18-20 depend from claim 17. The Applicant respectfully submits that claims 3-9, 11-16 and 18-20 are additionally allowable for their dependency from allowable base claims, as well as for the additional subject matter recited therein. As such, the Applicants respectfully request allowance of claims 2-23 and the prompt issuance of a Notice of Allowability.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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ABSTRACT

A transceiver circuit having 10 mb and 100 mb transmit and receive circuitries using the power saving methods allows for power consumption of the transceiver circuit to be significantly reduced. This is accomplished by providing each defined subcircuit with its own power supply and means of activation and deactivation. However, the method for activating and deactivating digital subcircuits and analog subcircuits are different and therefore different types of control signals and methods are provided. Furthermore, there are two general types of power-saving situations. The first type is near total circuit power-down and the second type is partial circuit power-down. In yet another embodiment, a method for minimizing energy usage during the idle period is utilized.

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